Public Scoping: Supplement to the 2003 Final Statewide Oil and Gas EIS and Amendment of the Powder River and Billings RMPs

Site: Blessed Sacrament Church
Lame Deer, Montana

Date: August 23, 2005

My name is William Walks Along, member of the Northern Cheyenne Tribal Council. I have been intricately involved in the diverse coal bed methane (CBM) related issues confronting the Northern Cheyenne Tribe since 1996 when Redstone Gas, co. preliminarily approached the Tribe about the potential development of CBM on the Northern Cheyenne Reservation. In addition, I have had involvement with the various energy development initiatives in southeastern Montana especially the Tongue River Railroad, the proposed development of Otter Creek coal tracts, the development of the Montco. Mine, expansion of mining operations by existing coal companies, and most recently planning and development of coal-fired power plants in the region.

I am a proponent of a meaningful analysis of the direct, indirect and cumulative social, economic and cultural effects large-scale CBM development on the Tribe or reservation, similar to the detailed quantitative analysis contained in the Bureau of Land Management's (BLM) 1990 SEIS for off-reservation coal development. Analysis of cultural and social and economic impacts in the current FEIS is limited to three paragraphs of conclusory statements. General statement in these areas of Tribal interests in all respects fail to meet the standard of adequate evaluation of cumulative impacts.

It is reasonably possible to engage in a far more detailed quantitative analysis. A future analysis should also include a discussion of other energy development projects proposed in the area of concern including: expansion of existing surface coal mines, Governor Schweitzer's proposed coal to liquid fuel (the Fischer-Tropes Process) conversion plant, the Tongue River railroad, etc. The Tribe cannot be expected to separate the energy development projects because of the Tribal government's responsibility to protect and assert the rights of its Tribal members based on applicable Federal laws and regulations. With a projected increase of 2,000 "new" residents alone for full-scale CBM development in the region, an obvious conclusion would be thousands of more new residents if construction and operation activities begin for development of the Otter Creek tract and the construction of the Tongue River Railroad. Cumulative impacts must be the standard of analysis.

Discussion must focus on mitigation of the serious impacts the Tribe expects from the combined energy development projects being planned for the southeastern part of Montana. The Tribe's concerns have not been heard by the FEIS decision-makers and it has taken litigation in Federal Court to have our legitimate concerns heard. The very limited resources of the Tribe have been taken to a breaking point. The Federal Government has an obligation to provide a serious discussion on "reasonable" mitigation measures. The Northern Cheyenne Tribe as a right to have its concerns related to social, economic and cultural impacts to considered in the SEIS. Thank you for the opportunity to address the issues at hand.

William Walks Along

U.S. Bureau of Land Management
Miles City Field Office
Attn: Mary Bloom, SEIS/Amendment Comments
111 Garryowen Road
Miles City, Montana 59301

September 1, 2005

Dear Ms. Bloom:

I wish to provide scoping comments on the Bureau of Land Management's (BLM) Supplemental Environmental Impact Statement (SEIS) for the 2003 Final Statewide Oil and Gas Environmental Impact Statement and Amendment of the Billings and Powder River Resource Management Plans (2003 FEIS/RMP). This SEIS is being prepared by order of the U.S. District Court for the District of Montana, which found (on February 25, 2005) that the 2003 FEIS/RMP was inadequate because it failed to consider a phased development alternative. In that decision, the Court did not look at other claims filed by the plaintiff, however, the Court did issue an "advisory opinion" that during this SEIS process, the BLM should also examine and analyze the effectiveness of private mitigation agreements in addressing aquifer drawdown and the need to include the Tongue River Railroad in the analysis of cumulative effects. I strongly agree with the Court.

Please ensure that the SEIS fully and adequately examines phased development that places a limit on the number of coal bed methane wells drilled and in operation **in both geographic area and in time**. I am also asking that the BLM fully and scientifically examine and analyze a Powder River Basin-wide approach to coal bed methane development.

Please ensure that the SEIS present adequate (*i.e.*, complete), scientific inventories of other important resources in the area of development that will be impacted by coal bed methane development. The National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) implementing regulations require an agency and decision maker to base a decision on objective, high-quality scientific analysis of impacts that the proposal may create (1500.1 (b)). This cannot be done by relying on inaccurate or incomplete information and physical and biological inventories. This list of inventories that I believe is needed includes, but is not limited to, baseline data of wells and springs (locations, flow rates, water quality, depth of well, aquifer that the water is coming from, etc.); surface water quality; prime agricultural lands and crops grown; important wildlife species and habitats, in particular, sage grouse leks and wintering grounds, mule deer winter range and fawning areas, bald eagle roosts and foraging areas, riparian species and zones, and data on any other sensitive wildlife and plant species found in the area; soil types, especially those being irrigated; geologic formations suitable for reinjection of coal bed methane wastewater; and air quality. Without baseline inventories and information, it will not be possible to develop a phased development alternative that will protect these other important resource values that the BLM is charged with protecting. Once inventories are complete, threshold values of change can be established so that adequate monitoring can be used to determine when and if harm is occurring.

In the SEIS, the BLM should re-examine and analyze the alternative of reinjection of coal bed methane wastewater. Northern Plains Resource Council (an organization to which I belong), has long advocated this approach. It would not only alleviate the harmful effects of the highly saline coal bed methane wastewaters in our waterways and on the surface of the land, but it would also preserve our aquifers. Dewatering of coal seam aquifers is already adversely impacting many Wyoming ranchers and townspeople.

In the SEIS, the BLM should examine and analyze an alternative that requires increased reclamation and bonding requirements for oil and gas development. The Government Accounting Office has published information that shows that the bonds required for estimated reclamation costs of oil and gas development are grossly inadequate.

The SEIS must also include the Tongue River Railroad in its analysis of cumulative impacts. An agency is required to analyze any proposal in consideration of other actions that are connected (1508.25) and are cumulative (1508.7, 1508.25 (a)(2)). While the 2003 FEIS/RMP mentioned the Tongue River Railroad, there was absolutely no analysis of the cumulative impacts from simultaneous development and operation of these massive projects.

While I am not opposed to the development of coal bed methane resources, it **must** be done in a prudent, scientifically based, and **responsible** manner that protects the other resources in southeastern Montana and the Powder River Basin and protects the rights and livelihoods of the farmers and ranchers who will remain on the land long after the coal bed methane is extracted.

Sincerely,

Beth Kaeding

Beth Kaeding
669 Stonegate Drive
Bozeman, Montana 59715

Bones Brothers Ranch
Birney, Montana 59012

U.S. Bureau of Land Management
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301

September 1, 2005

RE: SEIS/Amendment Comments

These comments are scoping comments for the BLM's Draft SEIS Document on Phased Development of CBM Resources in The Montana portion of the Powder River Basin. We are writing these comments because we did not feel that the Public Scoping meeting we attended in Lame Deer gave us that opportunity. The way this scoping session was carried out did not allow us to document our concerns. Please consider changing the format for the scoping process. We were very disappointed to drive all the way to Lame Deer for a meaningless meeting.

A phased development approach is even more critical now than it was in the past. Many recent developments have come about since the last CBM EIS was completed in 2003. The Tongue River Railroad will have final approval this fall from the Surface Transportation Board to begin construction of the rail line from Miles City to Decker. Additionally, development of the Otter Creek Coal tracts near Ashland seems eminent. The Custer National Forest Ashland District has come out with its Reasonable Foreseeable Development (RFD) scenario, which predicts 3,500 to 10,000 CBM wells on the Forest (Contact Pat Pearson, Minerals Specialist for Custer National Forest, Billings, MT.). None of these projects was included in the 2003 CBM EIS.

Each of these projects alone would be enough to dramatically change the way we try to earn our living ranching near Birney. The Railroad would bisect our pastures and take up valuable land that we now rely upon for winter grazing. It will increase weeds and sediment loads in our rivers and streams, increase noise and air pollution, and the construction phase will impact roads, schools and other social services in our area. Potential problems could come from railroad tracks subsiding after groundwater has been

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removed from aquifers which lie beneath the proposed track. This could cause increased derailments of coal trains spilling coal onto our property, our rivers and streams. Wildlife and fisheries would also be impacted. Fires from railroads are a common problem caused by sparks from the rail lines. How will local fire fighters respond to fires that are in the same area as CBM wells? Will local fire districts have maps showing where pipelines, compressor stations, and wellheads are located? As a volunteer firefighter I would be hesitant to fight fire in a CBM gas field without proper training and the knowledge of Where the CBM infrastructure is located. Please include a fire management plan in the SEIS.

Development of the Otter Creek Tracts will cause more degradation to our area. Plans for power plants, coalmines, and a coal gasification plant at the site would again cause increases in traffic, air and water pollution, and strains on social services. Also, power plants require a tremendous amount of water to cool the generators. With groundwater withdrawal from CBM development already depleting aquifers in this area, where will additional water come from to build these power plants?

Last fall the Custer National Forest came out with it's Reasonable Foreseeable Development plan for the Custer Forest Ashland District. This Document predicts development on the Forest Service at between 3,500 and 10,000 wells. The BLM"s 2003 EIS predicts 200 wells on the Custer Forest. The dramatic increase in expected wells needs to be addressed in this supplemental EIS document. We have grazing permits within the Custer National Forest, which are adjacent to our property. CBM development on the Forest will seriously disrupt our grazing activities there. Water drawdown from the aquifers will drain our wells and springs, while surface discharges will taint our surface water. Increased traffic will cause rise to increased dust and more respiratory diseases in our cattle. Weeds from CBM disturbances and trucks will spread onto our private lands and into our grazing leases. Operators leaving gates open will further make our life difficult as cattle will mix with other permitees' livestock and not be readily found until everyone has gathered their cattle for the season. Wildlife on the Forest will be displaced to private lands without development, which will bear the increased grazing of wildlife on their property.

The combined effects of these activities will change the character of this area forever. If all of these projects are under taken in the next 10 years, South Eastern Montana will no longer be the quiet, clean, healthy place it is now. Schools will be overcrowded; medical services will be seriously strained. Law enforcement, social services, and fire crews will be seriously overwhelmed. The BLM will have little say in how and when these other projects are implemented. It is vital for the BLM to act responsibly in light of these further developments. That is why a responsible phased development alternative must be implemented. The BLM could stop issuing drilling permits during construction phases of these other projects to cut down on the onslaught of impacts associated with the other projects. It could also have traffic ceilings and require bussing or other mitigation measures to address these impacts.

Management of produced water from CBM development was not realistically addressed in the last CBM EIS. Continued degradation of our streams and soils is not the answer. Neither is the depletion of our groundwater resources. Technology is available to bring the methane gas to the surface while leaving the water under ground. Reinjection is done almost everywhere else in the Rocky Mountain region for CBM wastewater. Treating wastewater to below the standard thresholds would allow irrigators to continue using the water, which they hold water rights to without degrading their soils. Jim Kuipers has completed studies since the last EIS, which prove these technologies are not only possible but are affordable as well. He has also done studies on the inadequacy of bonding in relation to reclamation efforts. The BLM in Buffalo, WY. has just increased its bonding requirements. Failure to include Kuiper's findings in your new SEIS would be remiss.

Water well mitigation agreements must also be looked at again. Current format is for companies to offer mitigation agreements to all water rights holders within 1 mile of development. 2003 CBM EIS predicts aquifer drawdowns of up to 20 miles. In Wyoming numerous landowners have lost their wells and springs due to current CBM extraction practices. They are now at the mercy of the companies to haul them poor quality CBM water for their needs. How long will the companies haul them water? The 2003 EIS predicts that "aquifers will not recover in the lifetime of any living Montanan". Do you really expect the companies to haul them water in perpetuity? Some of the water management agreements my neighbors have been offered by the companies are grossly inadequate. They have refused to sign them, as we will do as well, but that means they don't have any agreement and thus no compensation without going to court. The BLM needs to come up with a mitigation agreement that doesn't put the onus of proving which company caused their well or spring to go dry or that the damage wasn't cased by some other factor such as drought. If a person has a water right it should be assumed that they have been using that water and if it is affected should be compensated. This compensation must be adequate as property is useless without adequate water. The smartest way to avoid all this is to leave the water in the ground and only remove the gas. Also, a go slow phased approach would lessen the hydrological impacts associated with rampant CBM development.

Fidelity Exploration and Production Company (FEPCO) has applied to the Montana Department of Natural Resource Conservation (DNRC) for a water right on produced water to be marketed. This must be addressed in the SEIS. Since when does a mineral lease give the operator a water right? FEPCO's plan to sell this water (which they are currently doing to the Spring Creek Coal mine) opens up a way for CBM operators to be in the water marketing business. If this becomes reality on a larger scale, the companies will own any water they gather in their production lines. They will pump out SE Montana water long after the CBM is depleted because they will have developed customers for their produced water. If SE Montana is to survive CBM development, water-marketing schemes cannot be allowed or our aquifers will never be replenished. (For more info on

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FEPCO's latest water marketing plan, contact Keith Kerbal at the Billings, MT. DNRC office). Please look into this and address this serious issue.

The technology and information are out there to prepare an adequate SEIS that actually does provide some level of protection for the people, wildlife, land, air, and water in this truly unique portion of Montana. Should the BLM continue on it's hell bent to drill approach, while letting others assume the costs and problems associated with CBM extraction as now practiced, the BLM can expect further court cases and animosity. This is your chance to raise your requirements, implement best available technologies, and keep this area safe and healthy for all life forms. Failure to diligently pursue this appropriate course will, in the end, only slow down development, as more legal action will be necessary to protect our interests. Please "Do it right" this time. We are all weary of the meetings, hearings, comments, and expenses associated with your previous inadequate documents.

Sincerely,

Terry Punt

Terry Punt

Jeanie Alderson

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Western Environmental Law Center

Defending the West Land, Sky, Water, Wildlife, Culture

VIA EMAIL AND FEDERAL EXPRESS

September 2, 2005

U.S. Bureau of Land Management
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Attn: Mary Bloom, SEIS/Amendment Comments
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Miles City, Montana 59301

Re: Scoping Comments in Response to BLM's Notice of Intent to Prepare a Supplement to the Statewide Oil and Gas Final Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans (70 Fed. Reg. 45417 (August 5, 2005))

I. INTRODUCTION

American Lands Alliance, Biodiversity Conservation Alliance, and George Wuerthner (collectively "ALA") submit the following scoping comments for your careful consideration in preparing the Supplemental Environmental Impact Statement ("SEIS") for the 2003 Oil and Gas Final Environmental Impact Statement ("2003 FEIS") and Amendment of the Powder River and Billings Resource Management Plans ("2003 RMPs"). BLM should be aware of the fact that ALA prevailed at the U.S. District Court for the District of Montana on ALA's claim that BLM violated the National Environmental Policy Act ("NEPA") by failing to consider a "phased development" alternative in the 2003 FEIS. *American Lands Alliance v. U.S. Bureau of Land Management*, CV 03-71-BLG-RWA (D. Mont. June 9, 2005) (as amended June 13, 2005).

While Judge Anderson rejected ALA's claim that BLM had also violated NEPA for arbitrarily and capriciously failing to prepare a single EIS for the entire Powder River Basin ("Basin"), ALA's other NEPA claims – as well as a claim that BLM had violated the Federal Land Policy and Management Act of 1976 ("FLPMA"), most notably 43 U.S.C. § 1732(b) – were dismissed without prejudice and thus should not be ignored by BLM in preparing the SEIS.

In ALA's view, BLM's failure to consider a phased development alternative was reflective of systemic deficiencies and flawed assumptions that poisoned the validity of the *entire* 2003 ROD/RMPs and accompanying FEIS – not just the alternatives analysis. Therefore, these comments are premised on the assertion that BLM must revisit the entire management framework put in place by the 2003 ROD/RMP and the entire environmental impacts analysis in the FEIS.

Regardless, the decision by the U.S. District Court for the District of Montana presents BLM with the opportunity to "do it right" by seriously considering a phased development alternative. The following comments outline ALA's perspective on what a "do it right" management framework entails. Part II identifies ALA's key concern in the Basin: aquatic and terrestrial wildlife. Part III identifies issues involving compliance with FLPMA that BLM must consider in preparing the SEIS and signing any consequent RMPs through a Record of Decision ("ROD"). Part IV explains, in detail, ALA's proposal for BLM's range of alternatives for "phased development." Notably, Part IV, in providing this explanation, also identifies issues pertaining to BLM's duty to take a "hard look" at impacts to aquatic and terrestrial wildlife and to develop protective measures for aquatic and terrestrial wildlife.

Before delving into the specific comments, ALA notes that its comments are grounded in an understanding of the Basin's ecology and biology acquired, in part, from our work with Dr. Clait Braun and Dr. Brian Miller. The expert declarations they prepared during the U.S. Federal District Court proceedings in *American Lands Alliance v. U.S. Bureau of Land Management*, CV 03-71-BLG-RWA (D. Mont. June 9, 2005) (as amended June 13, 2005) summarize this work and ALA's knowledge base, and continue to be extremely relevant. Therefore, copies are attached for your review and should be considered supporting evidence of the scientific validity of ALA's comments. The signed originals are on file with the U.S. District Court for the District of Montana in Billings.

II. BLM MUST ADEQUATELY PROTECT THE BASIN'S AQUATIC AND TERRESTRIAL BIOTA

Originally, ALA was principally concerned with the management of terrestrial wildlife in the Basin, specifically greater sage grouse and black-tailed prairie dogs. This concern was based on the fact that these two species serve as indicators of the Basin's overall ecological health and integrity. Given deep concerns over water produced during CBM production, and the consequent impacts to water quantity and quality, ALA is increasingly concerned over the fate of aquatic populations and habitats within the Basin..

Specifically relevant to aquatics, the Powder River is a healthy remnant of the once vast and unspoiled river ecosystem spanning the Great Plains. One reason the Powder River is so special is that it still contains an intact native fish community, including several now-rare or declining species. Of the 32 fish species in the Powder River and its tributaries, 25 are native.

The native fish community remains intact because the river – at least prior to CBM development – was relatively undisturbed by water development and channelization, and because the existing flows, turbidity, and water quality remain primarily natural. This is in stark contrast to most

other rivers in the Great Plains, which are marked by alien (nonnative) fish species and reductions or loss of naturally occurring species as a result of habitat changes due to water development, water diversions, other human impacts, and alien species competition or predation.

Of the native fish species in the Powder River, one – the Sturgeon Chub – is globally imperiled. Another native fish, the Western Silvery Minnow, was found in a 1993 survey to be in drastic decline in Wyoming and has experienced serious declines in other states as well. The Shovelnose Sturgeon, Goldeye, Sauger, and Burbot are also rare or uncommon in Wyoming and are of conservation concern. For more information, we direct BLM to the Biodiversity Conservation Alliance's website http://www.voiceforthewild.org/general/news/fishfact02.html.

ALA's broadened focus on aquatic *and* terrestrial wildlife highlights a basic, undeniable fact: CBM development within the Basin causes significant and irreversible adverse impacts to virtually every other resource within the Basin. ALA thus expects BLM to give all fish and wildlife serious consideration in the SEIS process and consequent RMP-level ROD to afford these species adequate protection. Fundamentally, the viability of these species depends on complicated synergies between land, air, and water impacts. We therefore incorporate by reference the thoughtful scoping comments of the Northern Plains Resource Council with regard to air and water quality concerns, and oil & gas bonding/reclamation issues.

III. BLM'S FLPMA OBLIGATIONS

A. BLM Must Ensure that RMP-Level Decisions Comply With FLPMA

The SEIS process and any consequent RMP-level management framework must fully comport with FLPMA. In this light, although Judge Anderson dismissed ALA's FLPMA claim alleging, essentially, that BLM had not complied with FLPMA, in particular 43 U.S.C. § 1732(b), Judge Anderson did so without prejudice. Consequently, BLM must revisit the 2003 RMP/FEIS ensure that any revised decisions reached through the SEIS process do actually comport with FLPMA's mandates – as set forth immediately below in (B) – to protect fish and wildlife.

B. FLPMA Mandates Balance and Transparency

FLPMA's central goals are *balance* and *transparency*: balance between exploitation of the subsurface mineral estate and protection of surface resources, and transparency of decisions from the RMP stage through the site/project specific stage. "Balance" in this light demands that CBM production not come at the expense of the land's health and integrity, or render fish and wildlife vulnerable to extirpation via listing under the Endangered Species Act. "Transparency" demands that the people are assured that BLM's decisions are reasonable, understandable, fair, and efficacious – i.e., BLM says what it means and means what it says. In achieving these dual goals, BLM must be acutely cognizant of the fact that it is "the policy of the United States that":

> The public lands be managed in a manner that will *protect* the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will *preserve and protect certain public lands in their natural condition*; that will *provide food*

> *and habitat for fish and wildlife* and domestic animals; and that will provide for outdoor recreation and human occupancy and use.

43 U.S.C. § 1701(a)(8) (emphasis added). In achieving this policy, FLPMA mandates the management of the public lands proceed "without permanent impairment of the productivity of the land or quality of the environment" (43 U.S.C. § 1702(c)) and that BLM affirmatively prevent "unnecessary or undue degradation" (43 U.S.C. § 1732(b)) of the lands from CBM development. These provisions – 43 U.S.C. §§ 1701(a)(8), 1702(c), and 1732(b) – serve as the unalterable foundation of BLM's authority and duty to manage and protect our public lands. Therefore, how BLM seeks to achieve and comply with these goals and statutory mandates through the SEIS will be critical to the legal viability of the resultant ROD/RMPs and APD-level projects.

Given the central role of BLM RMP planning, BLM must demonstrate that these provisions are complied with at the RMP level – a decision that must be based on an adequate level of inventory data. 43 U.S.C. § 1711(a). FLPMA's RMP planning requirements require as much, directing BLM, *inter alia*, to "use and observe the principles of multiple use and sustained yield," to "use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences," "consider present and potential uses of the public lands," "consider the relative scarcity of the values involved and the availability of alternative means ... and sites for realization of those values," and "weigh long-term benefits to the public against short-term benefits." 43 U.S.C. § 1712. Compliance with these planning requirements requires, logically, compliance with 43 U.S.C. §§ 1701(a)(8), 1702(c), and 1732(b)'s foundational authority and duty to manage public lands. Deferring such compliance to the project stage emasculates FLPMA's statutory framework, returning BLM to the pre-FLPMA days of segregated resource management, and thereby contravenes FLPMA's central goals of balance and transparency.

In demonstrating compliance with FLPMA at the RMP level, BLM must account for the plain meaning of BLM's duty to "prevent unnecessary or undue degradation." *See Mineral Policy Center v. Norton*, 292 F.Supp.2d 30, 41-44 (D. D.C. 2003) (finding that FLPMA requires BLM to prevent both "unnecessary" as well as "undue" degradation); *Utah v. Andrus*, 486 F.Supp. 995, 1005 n.13 (D. Utah 1979) (explaining disjunctive nature of "unnecessary or undue degradation" standard in finding that, "[a] reasonable interpretation of the word 'unnecessary' is that which is not necessary for mining. 'Undue' is that which is excessive, improper, immoderate, or unwarranted")). Section 1732(b)'s plain meaning mandates that even if a proposed action does not cause *undue* degradation, that action is unlawful if it is causes *unnecessary* degradation. Similarly, even if an action is *necessary* to implement a proposed action, it is unlawful if it causes *undue* degradation.

We also note that BLM's authority to facilitate energy development (e.g., 43 U.S.C. § 1701(a)(12)) is subordinate to the commands that BLM shall manage the public lands "without permanent impairment of the productivity of the land and quality of the environment" (43 U.S.C. § 1702(c)) and "shall, by regulation or otherwise, take any action necessary to prevent unnecessary *or* undue degradation of the lands" (43 U.S.C. § 1732(b) (emphasis added). ALA acknowledges that domestic energy production is important to our nation. However, that fact

does not mean that energy production can proceed without complying with the limits set forth in FLPMA.

III. BLM'S NEPA OBLIGATIONS

NEPA provides a vehicle to ensure compliance with FLPMA's statutory mandates and, *vice versa*, FLPMA informs and shapes BLM's exercise of its NEPA duty to consider management alternatives and, ultimately, the BLM's actual selection of a specific alternative. *See Andrus v. Sierra Club*, 442 U.S. 347, 350-351 (1979) ("The thrust of [NEPA] is ... that environmental concerns be integrated into the very process of agency decision-making. The 'detailed statement' it requires is the outward sign that environmental values and consequences have been considered during the planning stage of agency actions. If environmental concerns are not interwoven into the fabric of agency planning, the 'action-forcing' characteristics of [NEPA] would be lost"); 42 U.S.C. § 4332(1) ("to the fullest extent possible ... the policies, regulations, and public laws of the United States shall be *interpreted and administered* in accordance with the policies set forth in [NEPA]" (emphasis added)). As explained by CEQ regulations implementing NEPA:

> Ultimately, of course, it is not better documents but *better decisions* that count. NEPA's purpose is not to generate paperwork – even excellent paperwork – but to foster excellent *action*. The NEPA process is intended to help public officials make *decisions* that are based on understanding of environmental consequences, and take *actions that protect, restore, and enhance the environment*.

40 C.F.R. § 1500.1(c) (emphasis added).

The interplay between FLPMA and NEPA supported ALA's contention in federal court that BLM was duty bound to consider a phased development alternative. It is critical at this juncture to therefore explain what, exactly, is entailed by phased development.

Phased development consists of the preparation of a front-end, comprehensive, landscape-scale RMP that controls the timing (i.e., rate) *and* location of development in the Basin to ensure, based on enforceable, RMP-level management prescriptions and quantifiable, RMP-level objectives and disturbance thresholds, the protection of the land's non-mineral resources and values. Such prescriptions, objectives, and disturbance thresholds are necessary and must be designed to comply with FLPMA's mandates as explained above.

The key is that the location, timing, and amount of development allowed is *intentional* and prescribed at the RMP/landscape scale rather than the site/project specific scale. This ensures that each CBM project clearly comports with landscape-scale objectives and falls within landscape-scale disturbance thresholds, a framework that consequently facilitates APD-level development and other management actions by tightening the connection between the RMP and project-specific levels.

In considering phased development, BLM should not restrict itself to a single phased development alternative. Rather, and in accord with the underlying purpose of NEPA's

alternatives requirements, BLM should consider several phased development alternatives based on high, medium, and low development scenarios. Consideration of phased development in these three different contexts facilitates the purpose of NEPA's alternatives requirements to "sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14

Several specific components flesh out the essential contours of each phased development alternative:

1. Each phased development alternative must be considered at the RMP/landscape scale, *prior* to project-level APD development. BLM must base its consideration and, if appropriate or necessary, adoption of phased development (or any other alternative for that matter) on a commensurate, landscape-scale NEPA analysis. Such a NEPA analysis must in turn be predicated on thorough inventories (43 U.S.C. § 1711(a)) of ecological conditions (e.g., air, water, and land health) and of specific aquatic and terrestrial wildlife populations and habitats across the landscape, most notably sage grouse and prairie dogs.

   Such an alternative, by necessity, must encompass all leases within the landscape; considering such alternatives only at the APD level would preclude BLM's ability to provide such protections at the landscape/RMP level. *See* 43 U.S.C. §§ 1701(a)(8), 1702(c), 1711(a), 1712, 1732(b); 42 U.S.C. § 4332(2)(C)(iii), (2)(E); 40 C.F.R. § 1502.14. Moreover, it is the RMP level which Congress, in passing FLPMA, emphasized in response to concerns over BLM's historical focus on segregated resource management. FLPMA at its most fundamental level is about integrated, coordinated management at broader spatial and temporal scales, and about balancing the use and protection of multiple uses through the preparation of a transparent RMP. *See* 43 U.S.C. § 1701, 1712. Such balancing is not possible at the APD-project stage because, by definition, such projects are focused on APDs – i.e., *drilling* – and, given that they are derivative of lessee APD submissions, do not provide for affirmative, preventative resource protection but, only, and at best, mitigation of drilling impacts. Moreover, segmenting landscape-scale protection – even if, *arguendo*, possible – to the APD stage obscures from the people the big picture that should otherwise have been clearly explained within the RMP.

   If BLM is unable to adequately evaluate the site-specific consequences of CBM development at the RMP stage, or unable to complete the requisite inventories, because, for example, project-specific design elements of an APD-level project are unknown, or because of lack of funding or time, BLM must ensure that it retains the authority to restrict or even prohibit development pending the completion of the requisite site-specific, "hard look" NEPA analysis – an analysis that would then still, even though prepared at the APD level, explicitly consider impacts to landscape-scale ecological health and integrity and, specifically, landscape-scale aquatic and terrestrial wildlife population and habitat concerns. In any event, BLM must disclose in the RMP any scientific uncertainty predicated on BLM's inability to conduct the requisite site-specific analysis. 40 C.F.R. § 1502.22.

   This raises a key issue: ALA is deeply concerned – based on BLM's historical practice in the Basin and throughout the Rocky Mountain West – that APD-level projects will assess

impacts only within a constrained analytical setting based on the specific purpose and need of the project. While adjacent and proximate APD-level projects, and other vectors of cumulative impacts, are sometimes assessed within the impacts analysis, APD-level alternatives analyses are delimited by the project's purpose and need which is largely, if not exclusively, derivative of the industry's APD-level project proposals. Thus, otherwise reasonable alternatives and affirmative mitigation and protection measures that must be assessed at the landscape scale but were deferred by the RMP-level decision to the site-specific stage will not, in fact, ever be completed as they will be dismissed as 'outside the scope of the project.' Such a 'shell-game' management framework runs afoul of NEPA (and, for that matter, FLPMA) and is untenable as a matter of logic, assuming, of course, that the objective is too manage multiple uses in a balanced and transparent fashion.

2. Controlled and intentional development presupposes an "equal playing field" for all resources – especially wildlife – such that development is not driven solely by industry-defined factors (e.g., the location of existing infrastructure) but, equally if not more so, by landscape-scale resource concerns over ecological health and integrity and population-level species viability. This is an extension of BLM's duty to give aquatic and terrestrial wildlife appropriate consideration at the RMP level, especially relative to the role and impact of landscape level processes that transcend individual lease parcels. *See* 43 U.S.C. §§ 1701(a)(8), 1702(c), 1711(a), 1712, 1732(b); 40 C.F.R. §§ 1502.16, 1502.22; MS § 6840.06(C)(2)(a).

   Ensuring an equal playing field is the heart of "multiple use" management, going hand-in-hand with the requirement that decisions be made with the commensurate level of NEPA analysis. The 2003 ROD/RMPs, by exaggerating the extent of the lease rights afforded to the industry lessees, created an unbalanced playing field that does not comport with the agency's NEPA and FLPMA obligations, or relevant precedent in the 9th Circuit Court of Appeals and the U.S. District Court for the District of Montana. *Conner v. Buford*, 848 F.2d 1441 (9th Cir. 1988); *Northern Plains Resource Council v. BLM*, 298 F.Supp.2d 1017 (D. Mont. 2003).

3. The RMP/landscape scale plan must, regardless of what type of alternative is eventually selected, establish specific, quantifiable, and enforceable landscape-scale management prescriptions. These prescriptions would control the location and timing of development at multiple spatial scales – i.e., at the Basin-scale *and* within more refined, discrete, geographically demarcated management areas (e.g., individual watersheds and/or project areas where more intensive development is anticipated).

   Temporally, within each spatial 'unit,' these prescriptions would limit the total level of disturbance allowable at any one time *and* restrict the pace of new disturbance allowed within each year. Such prescriptions would be based on specific, quantifiable, and enforceable objectives and disturbance thresholds established for, *broadly*, general landscape-scale ecological health and integrity and, *specifically*, species-specific populations and habitats for aquatic and terrestrial wildlife, including sage grouse and prairie dogs.[1]

[1] Given the number of species in the Basin, we do not expect BLM to adopt specific indicators and objectives for every single species, but, rather, and realistically for key species – e.g., BLM sensitive species – or

All management prescriptions, objectives, and disturbance thresholds should be conservative, with built in safety margins to ensure that resources are not managed to the edge of impairment or subject to unnecessary or undue degradation, and explicitly reflective of the common sense proposition that it is easier to prevent harm to the land than to attempt to repair it later.

Such a framework facilitates BLM's compliance with FLPMA and is consistent with BLM authority. *See, e.g.*, 43 U.S.C. § 1701(a)(8), 1712, 1732(b). Regardless, in justifying the ultimate framework, BLM must demonstrate "a rational connection between the facts found and the decision made" and, as a pure question of law, correctly interpret and apply FLPMA's mandates at the RMP level, not simply at the APD project level. *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059, 1065 (9th Cir. 2004) (requiring "rational connection") (citation omitted); 43 U.S.C. §§ 1701(a)(8), 1702(c), 1711(a), 1712, 1732(b).

Such a reasoned framework facilitates tiering from the RMP level to APD-level projects and ensures, to a greater degree, that APD-level projects are consistent with the RMP, otherwise comport with the law, and do not "hide the ball" through, e.g., a "shell-game" and the resultant, proverbial "death of a thousand cuts."

4. BLM must establish a monitoring, mitigation, and restoration plan explicitly linked to the prescriptions, objectives, strategies, and disturbance thresholds established for the Basin as described above in (3) above. 43 U.S.C. §§ 1701(a)(8), 1702(c), 1711(a), 1712, 1732(b); 42 U.S.C. §§ 4332(2)(C)(iii), (2)(E); 40 C.F.R. § 1502.14; MS 6840.06(C)(2)(b). Critically, such a plan must not be constrained nor its efficacy undermined by BLM's prior grant of lease rights pursuant to the 1994 Oil & Gas Amendment and Final Environmental Impact Statement ("1994 RMP/FEIS"). *Conner v. Buford*, 848 F.2d 1441 (9th Cir. 1988); *Northern Plains Resource Council v. BLM*, 298 F.Supp.2d 1017 (D. Mont. 2003). The 2003 ROD/RMPs "Wildlife Monitoring & Protection Plan" was fatally flawed and legally invalid from the start because it was constrained by BLM's exaggerated understanding of the scope of the lessees' lease rights.

   The monitoring, mitigation, and restoration plan should be designed to assess compliance with the RMP-level prescriptions, objectives, and disturbance thresholds. In specific terms of monitoring, BLM should establish a scaleable, Basin-wide monitoring system for each individual resource. Each of these resource-specific monitoring systems should be aggregated into a comprehensive index of overall Basin-wide ecological health and integrity to ensure integrated versus segregated resource management. APD-level projects would then link to each resource-specific monitoring system. The monitoring systems would be designed to assess whether prescriptions, objectives, and disturbance thresholds are achieved/breached. If objectives are not achieved within specified time periods, or if prescriptions or disturbance thresholds are breached, immediate remedial action would be automatically triggered. Such remedial action would be explicitly required by the

species indicative of the landscape's ecological health and integrity. In any event, greater sage grouse and black-tailed prairie dogs are excellent species for more intensive study, management, and protection as per our comments.

ROD/RMP and explicitly incorporated into leases as stipulations (not simply as "conditions of approval" ("COAs") which have a more limited reach and power due to the fact that they are intrinsically constrained by BLM's prior grant/expansion of lease rights). 43 C.F.R. § 1610.4-9 (requiring monitoring and evaluation of RMP implementation). The 2003 ROD/RMPs contained no such prescriptions nor any enforceable, quantifiable objectives and disturbance thresholds.

Once CBM development is completed, the RMP should require aggressive and automatic reclamation and restoration of the environment to achieve, to the extent possible, pre-disturbance conditions. The efficacy of such reclamation and restoration should be monitored and evaluated over an extended post-development period of time consistent with the reality that the Basin's ecosystems may take decades if not longer to heal. BLM can facilitate such reclamation and restoration by requiring lessees to undertake reclamation and restoration activities during development operations. In so doing, BLM must ensure that lessees' operations are adequately bonded so that lessees can are financially accountable for the impacts of CBM development and the costs of reclamation and restoration. At the very least, reclamation and restoration must ensure that the long-term viability of aquatic and terrestrial wildlife populations is not threatened.

5. Phased development must be understood as focused not simply on CBM development but, also, on the affirmative protection of wildlife corridors and core habitat areas which, by definition, transcend the footprint of individual leases and APD-level projects. Simply mitigating development at the APD level through COAs (that are of only dubious efficacy given their limited reach and power) and after-the-fact mitigation is inadequate to protect aquatic and terrestrial wildlife and does not comport with BLM's duties: (1) to ensure that management of the lands is "without impairment"; and (2) to "prevent unnecessary or undue degradation." 43 U.S.C. §§ 1702(c), 1732(b). Quite simply, these species, at both the individual and population level, function on broader spatial scales. Restricting protections to APD-level projects will therefore improperly constrain the scope of such protections within the scope of the project which is generally derivative of the lessee's APD submission.

6. As an extension of BLM's FLPMA duties, 43 U.S.C. §§ 1702(c), 1712, & 1732(b), and duty to conduct the requisite NEPA analysis before irreversibly and irretrievably committing to full-field development, existing lease stipulations must be thoroughly reviewed to assess the need for additional or strengthened lease stipulations to mitigate impacts *within* areas slated for development (as compared to the protection of wildlife corridors and core areas which focuses on protecting key lands *outside* of areas slated for development). The stipulations imposed as per the 1994 RMP/EIS are simply inadequate, outdated, and do not reflect available science.[2] Moreover, the existing stipulations – imposed at a point where CBM

[2] For example, for sage grouse, the 2003 ROD/RMPs rely on thee principal lease stipulations established by the 1994 RMP/FEIS: (1) a 1/4 mile no surface disturbance buffer around known leks; (2) a 2.0 mile no surface disturbance timing restriction between March 1 - June 15 within 2.0 miles of known leks; and (3) a prohibition of surface use within "designated crucial winter range" between December 1 - March 31. MT FEIS at 4-161; MT ROD at Appx. A, W-9. For prairie dogs, the 2003 ROD/RMPs does not provide any protective stipulations or substantive mitigation measures. *Id.* at 4-171. Prairie dogs only receive indirect protection via provisions established for black-footed ferrets and mountain plover, which are themselves suspect. MT EIS at 4-168; Mt EIS Vol. 2,

development was limited by the 1994 RMP/EIS to only the "drilling of test wells and initial small-scale development of CBM" (Administrative Record for 2003 ROD/RMP, § VI, File D, Doc. 45 at 4) – do not reflect the massive scale of reasonably foreseeable development.

COAs and other APD-level protections, or reliance on post-development monitoring and mitigation, is inadequate given: (1) BLM's affirmative conservation duties (43 U.S.C. § 1732(b)); and (2) the fact that BLM's authority is intrinsically constrained by lease rights that restrict and delimit BLM's authority to protect resources and values to, only, additional "reasonable measures" (43 C.F.R. § 3101.1-2). In the 2003 FEIS, BLM argued that lease stipulations were not reviewed because the 2003 FEIS was not a leasing analysis but, rather, a development document. *See* 2003 FEIS at 2-2, 5-102 (C/R-90), 5-107 (C/R-131).

Such a position flies in the face the essential holding of Judge Anderson's decisions in *Northern Plains Resource Council v. BLM*, 298 F.Supp.2d 1017 (D. Mont. 2003) and *American Lands Alliance v. U.S. Bureau of Land Management*. *See also Conner v. Buford*, 848 F.2d 1441 (9th Cir. 1988). Notably, the *American Lands Alliance* decision incorporated Judge Anderson's consolidated February 25, 2005 decision in *Northern Plains Resource Council v. BLM*, CV 03-69-BLG-RWA (D. Mont. Feb. 25, 2005) and *Northern Cheyenne Tribe v. Norton*, CV 03-78-BLG-RWA (D. Mont. Feb. 25, 2005) in which Judge Anderson stated, unequivocally, that the lessees' lease rights were not "absolute" and were limited by the 1994 RMP/FEIS. *See NPRC/Northern Cheyenne*, Order of February 25, 2005 at 16-17, 19. BLM consequently cannot, on the one hand, expand development rights without, on the other hand, revisiting the efficacy of lease stipulations that must be imposed prior to the expansion of such rights. BLM must therefore revisit lease stipulations at the RMP level through the SEIS before giving the green light to expanded CBM development beyond the scope of the 1994 RMP/EIS.

7. In considering phased development through high, medium, and low development scenarios, BLM must also *step back* and determine whether it is inappropriate – given the SEIS and landscape-scale concerns – to allow actual development of oil and gas leases and *look forward* to determine whether any further leasing should be allowed. This may be necessary to ensure that BLM can protect identified wildlife corridors and core areas (*see* (5) above) by protecting un-leased lands more important for aquatic and terrestrial wildlife conservation, prohibiting development within existing lease holdings outright or, if necessary, buying back or invalidating leases.

BLM's authority in this regard is consonant with – if not demanded by – *Northern Plains Resource Council v. BLM*, 298 F.Supp.2d 1017 (D. Mont. 2003) and also BLM's own policies pertaining to leasing alternatives (BLM Handbook H-1624-2, *Planning for Fluid Minerals*) (requiring consideration of various leasing alternatives). Even if BLM believes that certain options – such as lease buy-backs – exceed their authority, BLM should nonetheless consider them if necessary to satisfy other mandates or to otherwise reduce

Wildlife Appx., Biological Assessment at 16; MT ROD at Appx. A, W-6. These lease stipulations are inconsistent with recommendations for wildlife protection. *See* Declarations of Dr. Clait Braun and Dr. Brian Miller (attached).

impacts to acceptable levels. 40 C.F.R. § 1502.14(c) (requiring range of alternatives to "[i]nclude reasonable alternatives not within the jurisdiction of the lead agency").

8. BLM must prepare a commensurate, landscape-scale "hard look" NEPA analysis. The FEIS accompanying the 2003 ROD/RMPs, on this count, is severely lacking given the fact that the 2003 ROD/RMPs gave a green light to full-field CBM development by expanding the development rights of the lessees, but only contained a very shallow analysis of impacts. The fact that further APD-level analysis was required did not shield the 2003 FEIS as the 2003 ROD/RMPs expanded the development rights afforded by the 1994 RMP/FEIS. *See Northern Plains Resource Council v. BLM*, 298 F.Supp.2d 1017 (D. Mont. 2003). Where an RMP-level decision makes such an expanded commitment to this level of development and therefore constrains the ability of the agency to "say no" and protect aquatic and terrestrial wildlife at the APD-level project stage, BLM is on weak ground in arguing that the SEIS accompanying any new ROD/RMP need only contain a general, shallow analysis of impacts.

   Furthermore, the 2003 FEIS is largely meaningless in terms of illustrating the actual impact of CBM development to the ecological health and integrity of the landscape or to the viability of aquatic and terrestrial wildlife. BLM's rhetorical pronouncements and suggestions that impacts, while perhaps significant, were also acceptable, contain no rational connection between underlying inventories, environmental analysis of direct, indirect, and cumulative impacts, and the decision to, despite the impacts, proceed with full-field development. BLM, more often than not, simply: (1) provides background information and science concerning a wildlife species; (2) indicates that impacts would occur; and (3) asserts that stipulations, APD-level analyses, and the WMMP will reduce impacts. *See* 2003 FEIS at 4-159 thru 4-196.

   What is sorely lacking is any quantifiable – or for that matter, qualitative – analysis of the actual scope of the impacts, the disturbance thresholds used to determine whether the impacts are acceptable or unacceptable, and an analysis of the efficacy of protective measures to restrain impacts within acceptable levels. Nor is there baseline data regarding population levels, amount of functional habitat, spatial/geographic distribution of populations and habitats, trends regarding populations and habitats, the reasons for such trends, or population and habitat health. Instead, BLM relied on a Wildlife Monitoring and Protection Plan allegedly designed to resolve all of wildlife concerns but which did not and, moreover, contained few if any meaningful and real triggers for action.

   Other than finding out the obvious – i.e., that CBM harms aquatic and terrestrial wildlife and that mitigation would reduce impacts (to some unspecified level) – there is absolutely nothing within the 2003 ROD/RMPs and accompanying FEIS that demonstrates that BLM adequately understood the implications of full-field CBM development to the land's ecological health and integrity and the viability of aquatic and terrestrial wildlife. In other words, the 2003 ROD/RMPs and accompanying FEIS contain no rational connection between the facts found and the choice made to proceed with CBM development. *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059, 1065 (9th Cir. 2004). Such deficiencies must be remedied by BLM in preparing the SEIS and, ultimately, signing a new ROD/RMPs.

In this light, several questions raised by deficiencies within the 2003 ROD/RMPs require answers in the SEIS:

- If site-specific analysis demonstrates that the impacts of CBM development are unacceptable, how will the BLM respond given the fact that lessees will have legally defensible rights to full-field development?
- How will BLM demonstrate that impacts are either acceptable or unacceptable?
- How will site-specific NEPA analysis account for the fact that aquatic and terrestrial wildlife species function at broad, population and landscape scales, scales that cannot be assessed within APD-level projects?
- How can any Wildlife Monitoring & Protection Plan adequately respond to threats to wildlife if RMP level decisions fail to collect the requisite baseline ecological and biological data relevant to the species and fail to establish landscape and population level objectives and disturbance thresholds?
- Without a comprehensive, front-end NEPA analysis, won't BLM create more work for itself at the APD-level project stage?
- How will BLM adequately assess the cumulative impacts of APD-level projects to ecological and biological conditions at the landscape and population scale?
- How will BLM "tier" APD-level projects to the RMP, and, relatedly, how will BLM demonstrate that tiering is appropriate in this circumstance?
- How will BLM assess the impacts to and manage aquatic and terrestrial wildlife populations that are contiguous aquatic and terrestrial wildlife populations in the Wyoming portion of the Basin? In particular, how will BLM assess impacts to and manage sage grouse populations and habitats contiguous to sage grouse populations and habitats in northeast Wyoming, given the fact that habitats, as demonstrated by studies at the Decker Coal Mine, were continuous?
- How will fragmentation induced by CBM development constrain maintenance of aquatic and terrestrial wildlife population size and distribution (for example, as truly specialist species, sage grouse depend on extremely large landscapes (e.g., local populations may require at least 400 mi^2 to sustain a breading population of ~2000 individuals))?
- How will BLM assess long-term impacts from development given that even under the best of circumstances, habitat reclamation useful to, for example, sage grouse may take 30 years to achieve, long past the time of the expected life of the project as per the 2003 ROD/RMPs, thus creating a situation where impacts will persist beyond the lifetime of the project and merge with impacts caused by future development?

- Will BLM assess development reasonably anticipated and likely to occur beyond the expected life of the project which, for the 2003 ROD/RMPs was 25 years? If not, how will BLM account for the persistence of impacts beyond the 25 year project life, especially given the fact that if future development occurs beyond this time frame, impacts will not simply persist, but be added to and sustained perhaps in a synergistic fashion?

- What is the success rate of reclamation, and to what extent will reclamation actually restore ecological structure, function, and composition?

- How will BLM account for the practical realities of staff and budget limitations? If massive, full-field development is authorized, won't BLM's ability to enforce management prescriptions, monitor progress, and re-evaluate management decisions decrease (an acute concern for BLM given the June 2005 GAO Report). *See Oil & Gas Development: Increased Permitting Activity has Lessened BLM's Ability to Meet its Environmental Protection Responsibilities* (GAO-05-418) (June 2005).

- How will BLM ensure that the validity of the SEIS is not undermined by the waiver, exception, or modification of such protections in APD-level projects? Will BLM account for waivers, exceptions and modifications?

- How will BLM account for the persistence of livestock grazing within fragmented habitat areas for, especially, sage grouse? How will livestock grazing cumulatively impact wildlife habitat that is fragmented from oil and gas development? What percentage of land – after all impact vectors are accounted for – will remain in a relatively undisturbed state capable of maintaining species function at local, regional, and population scales?

- How will BLM account for the impacts of CBM water production on aquatic wildlife populations and habitat as a matter of both quantity and quality, and what sorts of protective measures will BLM take to protect aquatic wildlife populations and habitats in accord with FLPMA?

- Will BLM reassess the stipulations provided for aquatic and terrestrial wildlife, in particular sage grouse and prairie dogs (*see supra* note 3), especially, relative to sage grouse, BLM's concession in the ROD/RMPs and accompanying FEIS that stipulations were not adequate? Will BLM consider larger no-disturbance buffer zones (i.e., at least 2 miles) for sage grouse as per the latest scientific evidence? Will BLM continue to embrace a lek-centric approach, or will protections be provided for all sage grouse habitats, including nesting, rearing, and wintering habitat? If not, how will BLM ensure sage grouse viability? How will BLM protect prairie dogs by relying on protections for black-footed ferrets when there are no black-footed ferrets in the area? Aren't these indirect protections for prairie dogs derived from black-footed ferrets therefore completely illusory? How will BLM acknowledge and will BLM adopt protections for prairie dogs commensurate with their role as keystone, highly interactive species that function as an ecological driver of the grasslands ecosystem? If prairie dogs decline, does this not strongly indicate that the broader ecosystem is degraded and simplified in a

way that does not comport with BLM's FLPMA duties? What stipulations protect aquatic wildlife populations and habitats from the anticipated level of development?

- How will BLM account for the reality that in the sagebrush steppe and grasslands environments of the Basin, vegetative response and change is often too slow to measure without intensive, well-designed, scientifically based monitoring systems imposed over a large area over a long time frame? Won't BLM's ability to effectively respond to change be undermined by the fact that development will already be in place once sufficient monitoring data is accumulated and evaluated – a process that could take years?

- How will CBM development in the Montana portion of the Basin negatively impact regional population stability of aquatic and terrestrial wildlife in both Montana and Wyoming? Won't development in Wyoming not simply have an additive, but, in fact, synergistic impact to sage grouse and prairie dogs and other aquatic and terrestrial wildlife populations?

- How will BLM account for the fact that impacts to wildlife, especially prairie dogs, can ripple through the broader biological community due to a loss of species interaction wherein the effective extinction of species interactions occurs well before the species themselves have disappeared given that taxonomic representation, even if demographically viable, does not ensure ecological function, a significant problem given that when ecological function is impaired, the ecosystem simplifies and degrades?

- Will CBM development contribute to the need to list any aquatic and terrestrial wildlife populations in the Basin under the ESA, in particular sage grouse and prairie dogs? What is the efficacy of BLM's protective measures to prevent the decline of aquatic and terrestrial wildlife populations or, if it won't halt their decline, how will such protective measures ensure that they are not listed under the ESA? How will BLM take affirmative action to prevent these species' decline?

- How will the SEIS consider the interaction of anthropogenic and natural drivers and how that interaction affects aquatic and terrestrial wildlife and the broader ecosystem?

- How will BLM assess the spatial pattern of aquatic and terrestrial wildlife and habitat impacts across the broader landscape?

- How will BLM acknowledge and respond to the fact that it takes more than restoring vegetation to restore ecosystem function? If reclamation does not restore function, what is the point?

- Does CBM development compromise the ability of the Basin to play a role in repairing the range-wide conservation of aquatic and terrestrial wildlife, in particular sage grouse and prairie dogs? How will the Basin's SEIS ROD/RMPs fit into the broader regional context, a necessity if land management agencies intend to protect existing diversity and reverse the loss of diversity across broad landscapes, not simply within defined administrative units?

These questions reflect serious "hard look" deficiencies within the 2003 FEIS. Such deficiencies also illustrate a systemic flaw within the management framework and analysis established by the 2003 ROD/RMPs: BLM created a massively imbalanced framework that irreversibly set in motion full-field CBM development without adequate consideration of aquatic and terrestrial wildlife. In effect, BLM's management framework and analysis, by: (1) giving a 'green light' to full field CBM development – and thereby lifting the 'cap' imposed by the underlying 1994 RMP/FEIS; (2) concurrently deferring the site-specific "hard look" NEPA analysis to the APD project stage; (3) relegating the bulk of protective actions to the site-specific stage and a responsive, rather than preventative Wildlife Monitoring and Protection Plan; (4) stacked the deck in favor of full-field CBM development. FLPMA and NEPA presuppose an "equal playing field" that here, simply was not afforded by BLM to aquatic and terrestrial wildlife in the 2003 ROD/RMP and accompanying FEIS.

IV. CONCLUSION

The above positions concerning BLM's FLPMA and NEPA obligations and the components of a phased development alternative suggest that BLM, through a more rigorous and comprehensive process, has an opportunity to demonstrate that CBM development can be "done right." Ironically, the management framework established by the 2003 RMP/RODs actually impeded BLM's ability to process APD-level projects, increased the chances that such APDs would be challenged, and did little to protect the environment at either the landscape or APD-level project scale. Such a zero sum game was untenable as a matter of law and policy.

Put another way, if BLM, here, invests in the preparation and adoption of a reasoned, informed, enforceable, and comprehensive RMP-level plan that accounts for and incorporates the above considerations and provisions at the *start* of the process, BLM's burden at the APD-level project stage will be lessened, a situation that will invariably benefit the environment, and also streamline the regulatory processes and time periods lessees are currently subjected to. If BLM does not, BLM's decisions will be vulnerable and exposed to challenge.

Significant attention is now focused on BLM's oil and gas activities in the Intermountain West. BLM, as a public agency, should embrace this attention and encourage a healthy, open dialogue of these profoundly important issues and how they affect the long-term environment of the Basin. To that end, if BLM has any questions regarding our comments, please do not hesitate to contact ALA through the undersigned counsel.

Sincerely,

Erik Schlenker-Goodrich
Counsel for American Lands Alliance,
Biodiversity Conservation Alliance, and
George Wuerthner

EXHIBIT A

DECLARATION OF DR. CLAIT E. BRAUN

Submitted during the U.S. District Court for the District of Montana Proceedings in *American Lands Alliance v. U.S. Bureau of Land Management*, CV 03-71-BLG-RWA (D. Mont. June 9, 2005) (as amended June 13, 2005) and Resubmitted as an Attached Exhibit in Support of the Scoping Comments Prepared by American Lands Alliance, Biodiversity Conservation Alliance, and George Wuerthner in Response to BLM's Notice of Intent to Prepare a Supplement to the Statewide Oil and Gas Final Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans (70 Fed. Reg. 45417 (August 5, 2005))

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
BILLINGS DIVISION

AMERICAN LANDS ALLIANCE, et al., Plaintiffs, vs. U.S. BUREAU OF LAND MANAGEMENT, et al., Defendants, and MARATHON OIL COMPANY, et al., Defendant-Intervenors.	Case No: CV-03-71-BLG-RWA DECLARATION OF DR. CLAIT E. BRAUN IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT AND INJUNCTIVE RELIEF

DECLARATION OF DR. CLAIT E. BRAUN

I, Clait E. Braun, declare:

I. Background and Qualifications

1. My name is Clait E. Braun, and I reside in Tucson, Arizona. This declaration is submitted on behalf of American Lands Alliance, Biodiversity Conservation Alliance, and George Wuerthner.

2. I have a B.S. in Technical Agronomy from Kansas State University, a M.S. in Wildlife Management from the University of Montana, and a Ph.D. in Wildlife Biology from Colorado State University. In addition, I have attended numerous short courses, workshops, technical sessions, etc., to remain current in my professional work and am a Certified Wildlife Biologist.

3. I was a Research Wildlife Scientist, Wildlife Research Leader, and Avian Program Manager for the Colorado Division of Wildlife from 1969 to 1999. In addition, I taught as an Instructor at the University of Montana (1963-65) and Colorado State University (1966-69), and have been an invited lecturer at more than 20 U.S. and Canadian universities. I also worked as a Soil Scientist in Montana (1964) and Kansas (1961) for the U.S.D.A., Soil Conservation Service, and as a Research Technician with the Montana Department of Fish and Game (1965).

4. My field research was primarily on different species of birds, especially species of grouse (1965-2004). I specifically conducted and directed research on sage-grouse and Columbian sharp-tailed grouse throughout Colorado from 1973 through mid 1999. My research on sage-grouse and Columbian sharp-tailed grouse has caused me to review sagebrush steppe ecosystems (plants and animals) throughout all western states and provinces including the Powder River Basin within Montana and Wyoming. This research has led to more than 200 scientific

publications, mostly in peer-reviewed journals.

II. Comments

5. In preparing this declaration, I reviewed the Record of Decision, Montana Statewide Oil and Gas EIS and Amendment of the Powder River and Billings RMPs, especially Appendix A, Wildlife Monitoring Protection Plan. These documents have various dates in April 2003. I previously reviewed the Wyoming CBM DEIS, the Montana CBM DEIS, and the (variously named) Montana and Wyoming Sage Grouse Conservation Plans. Further, I have reviewed the appropriate scientific literature on sage-grouse and their habitats especially as relating to southeastern Montana and northeast Wyoming including that pertaining to surface coal mining and oil and gas development.

6. The sage-grouse is the most recognizable avian species of the sagebrush steppe. This grouse is solely dependent on sagebrush for all of its' life processes and is unique among all birds in its' use of the sagebrush steppe. For the species to persist without extirpation, large tracts of mostly undisturbed and only lightly degraded sagebrush habitats with minimal fragmentation must be provided. Thus, the presence of sage-grouse is a measure of the overall condition and health of the sagebrush habitat type.

7. The sage-grouse population in southeastern Montana historically and recently was contiguous with sage-grouse in northeast Wyoming as habitats were continuous. Thus, sage-grouse population effects from oil and gas developments within the Powder River Basin in one state will also affect sage-grouse populations in the other state. This interchange and expected effects have been documented through work at the Decker surface coal mine by Eng et al. (1979) (U. S. D. A., Forest Service, General Technical Report RM-65: 464-468).

8. The work with sage-grouse by R. L. Eng and coworkers as cited in 7 (above) demonstrate that sage-grouse populations in the Powder River Basin are most likely locally migratory (at least within the Basin) with few non-migratory segments.

9. Examination of the genetic variability of sage-grouse populations throughout Montana and Wyoming by Dr. S. J. Oyler-McCance and Dr. T. W. Quinn (and co-investigators) of the U. S. Geological Survey and Denver University Conservation Genetics Laboratory reveal no significant differences among "regionally identifiable" subpopulations of sage-grouse in southeastern Montana and northeast Wyoming (S. J. Oyler-McCance, personal communication, 17 June 2004). Thus, considerable interchange of sage-grouse between adjacent areas in southeastern Montana and northeast Wyoming is indicated from and supported by analysis of genetic material.

10. The EIS glosses over the expected number of wells that may be drilled (up to 139,000 in the Powder River Basin of which up to 18,300 may be in Montana) and the actual density of wells (80 acre spacing assumed). Further, analysis of cumulative effects from all disturbances (including continuation of livestock grazing) is generally lacking. This suggests the BLM is "guessing" and has failed to consider the obvious impacts to sage-grouse of development of CBM wells and productions activities. The expected fragmentation of habitats and subpopulations of sage-grouse in the Powder River Basin will greatly constrain maintenance of sage-grouse population size and distribution, and will lend support to existing petitions to list sage-grouse as threatened or endangered under the federal Endangered Species Act. The EIS (4-180) does recognize that fragmentation may result in extirpation of local populations.

11. The Wildlife Monitoring Protection Plan (Appendix A) is premised on an inaccurate

description and understanding of the expected and cumulative effects of disturbance that will occur which will negatively affect all life processes of sage-grouse. Further, development of multiple wells, while rarely mentioned, will occur with negative impacts not only on local subpopulations but also on populations at a landscape scale. Sage-grouse are truly specialist species (they depend upon sagebrush for food and cover) that depend on extremely large landscapes (Connelly et al. 2000) (Connelly, J. C., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. Wildlife Society Bulletin 28: 967-985). Local populations may require at least 400 mi^2 to sustain a breeding population of ~2000 individuals (C. E. Braun, unpublished data, Jackson County, Colorado).

12. The expected life of the project is 25 years (WMPP, pages W-2 and 3). However, the project impacts will continue and may be permanent. My experience with oil field development in Colorado (Braun et al. 2002) (Braun, C.E., O. O. Oedekoven, and C.L. Aldridge. 2002. Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse. Transactions of the North American Wildlife and Natural Resources Conference 67:337-349) suggests there is no end to negative impacts to sage-grouse populations as activities may change annually, noise disturbance varies from year to year, additional wells and compressors may be added, new trails, roads, pipelines, and power lines will appear while reclamation of abandoned areas is inadequate and uncertain at best. Under the best circumstances, habitat reclamation useful to sage-grouse may take 30 years. Thus, there is substantial uncertainty that habitats useful to sage-grouse can be reclaimed and that sage-grouse populations will respond. However, it is certain that sage-grouse populations will decrease as a result of oil and gas development (Braun et al. 2002) and those in the most heavily developed areas (more than 1 well

/40 acres) will be extirpated.

13. The expected effects of disturbances (noise, traffic, etc.) on sage-grouse lek complexes from development of roads and drill pads on the scale envisioned are habitat fragmentation, loss of population continuity including loss of genetic diversity, reduction in population size through disrupted breeding, reduced nest success, and reduction in chick survival, all leading to eventual lek abandonment, bird kills by vehicle strikes, and decreased densities of sage-grouse. These impacts have been demonstrated to occur in Montana and Wyoming and elsewhere (Connelly et al. 2000).

14. The expected decrease in population density of sage-grouse in the Powder River Basin of Montana will reduce the population viability and connectivity with other populations across southeastern Montana and northeast Wyoming. This will negatively impact the overall abundance and distribution of sage-grouse throughout the region.

15. Road construction and use; drill pad construction and use; accompanying human contacts, etc. will have a significant negative impact on sage-grouse in the region, because all surface disturbances within 2 miles of lek complexes are known to adversely affect non-migratory sage-grouse populations (Connelly et al. 2000). Data from the BLM clearly demonstrates that surface activity within ¼ to 2 miles of sage-grouse leks decrease lek activity and result in loss of active leks. For example, the Pinedale Anticline Project Draft EIS 1999: 5-34 reports that "of leks with at least one well within a 0.25-mile radius, four times as many are inactive than active" and that "more than three times as many leks with at least one oil or gas well within a 0.50-mile radius are inactive." While the BLM has conceptually supported the published "Guidelines", local and State offices have selectively adopted only portions of them. This is most clearly demonstrated

with the "guidelines" for no surface disturbance within 2-3 miles of active leks for non-migratory populations and up to 11 miles from active leks for migratory populations (Connelly et al. 2000:978). The Connelly et al. (2000) publication is based on scientific studies from throughout the distribution of sage-grouse and is the only scientifically based current "Guidelines" for management and protection of sage-grouse habitats and populations.

16. To mitigate the expected negative impacts of oil and gas development, the BLM should follow the approved "Guidelines to manage sage grouse populations and their habitats" (Connelly et al. 2000), which the BLM has conceptually adopted and accepted for implementation on the public lands it manages. These Guidelines strongly recommend that no surface development (including roads and drill pads) be allowed at least within 2 miles of active leks or further depending, as stated, upon whether the population is migratory or non-migratory (Connelly et al. 2000: 978).

17. The Wildlife Monitoring Protection Plan indicates that specific mitigation stipulations could be implemented near sage-grouse leks as conditions of approval for APDs (Application for Permit to Drill). However, the BLM then grants the AO (Authorized Officer) authority to "Waive", and grant "Exceptions" and "Modifications" to most if not all stipulations. My experience and the BLM's own records indicate that few requests for waivers, exceptions, and modifications are refused. Thus, even with stipulations intended to protect sage-grouse, there is little on-site protection.

18. The Wildlife Monitoring Protection Plan (page W-9) implies that livestock grazing of developed areas will continue. This practice will exacerbate the negative impacts of oil and gas development as the remaining herbaceous vegetation will be in smaller patches which are less

useful for sage-grouse, that will be more heavily grazed by livestock as no data are presented to indicate any change in livestock stocking rates, timing of grazing, or duration of grazing.

19. The general pattern for surveys for active leks is "at least once per 5 years" except for specific trend blocks and 2-mile buffers, which may be annually monitored (WMPP). The once every 5-year monitoring plan is inadequate to immediately detect changes in numbers of males present to incorporate "Adaptive Management" strategies. Adaptive management could be useful if adequate and accurate data are collected annually in all areas disturbed by oil and gas development. A program that measures sage-grouse responses to development at 3 or 5-year intervals is totally inadequate for use of adaptive management. Further, use of adaptive management in the sagebrush steppe to alter ongoing practices has no scientific merit as vegetative response and change is too slow to measure without intensive, well-designed, scientifically based, monitoring systems over a large area (In BLM's Montana planning area, the BLM manages 1.5 million surface acres 3.2 million acres of subsurface oil and gas estate; in BLM's Wyoming planning area, the BLM – and Forest Service – manage 1.1 million surface acres and 4.3 million subsurface acres).

20. The BLM has identified the Greater sage-grouse as a "Sensitive Species" which is to be considered no different than a "Candidate" species for federal listing as Threatened or Endangered. Because this species has been petitioned for listing under the federal Endangered Species Act, and the U.S. Fish and Wildlife Service in April 2004 made an affirmative finding on the petition and decided that further study is warranted, the Greater sage-grouse merits special protection and consideration.

III. Conclusions

21. My professional analysis, based on 30 years of research, data analysis, and scientific writing is that oil and gas development in the Powder River Basin will result in significant declines in terms of population size of Greater sage-grouse, which will negatively impact regional population stability in both Montana and Wyoming. Further, use of the ¼ mile restriction for surface occupancy around active leks is a prescription for extinction of migratory and non-migratory populations of sage-grouse. Any reduction of the number of sage-grouse in the Powder River Basin has national significance and could lead to listing as threatened under the Endangered Species Act. The planned mitigation (WMPP) provides no assurance that anything would be done to reduce impacts to sage-grouse to acceptable levels. Thus, I conclude that oil and gas development in the Powder River Basin will have a significant adverse impact on Greater Sage-grouse.

I declare under the penalty of perjury that the foregoing is true and correct to the best of my knowledge. 28 U.S.C. § 1746.

Signed this ____ day of _____, 2004.

_____
Dr. Clait E. Braun

EXHIBIT B

DECLARATION OF DR. BRIAN MILLER

Submitted during the U.S. District Court for the District of Montana Proceedings in *American Lands Alliance v. U.S. Bureau of Land Management*, CV 03-71-BLG-RWA (D. Mont. June 9, 2005) (as amended June 13, 2005) and Resubmitted as an Attached Exhibit in Support of the Scoping Comments Prepared by American Lands Alliance, Biodiversity Conservation Alliance, and George Wuerthner in Response to BLM's Notice of Intent to Prepare a Supplement to the Statewide Oil and Gas Final Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans (70 Fed. Reg. 45417 (August 5, 2005))

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
BILLINGS DIVISION

AMERICAN LANDS ALLIANCE, et al., Plaintiffs, vs. U.S. BUREAU OF LAND MANAGEMENT, et al., Defendants, and MARATHON OIL COMPANY, et al., Defendant-Intervenors.	Case No: CV-03-71-BLG-RWA DECLARATION OF DR. BRIAN MILLER IN SUPPORT OF PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT AND INJUNCTIVE RELIEF

DECLARATION OF DR. BRIAN MILLER

1. My name is Brian Miller and I live at 21351 East 44th Avenue, Denver, Colorado 80249.

2. I have a B.S. and M.S. from the University of Illinois, and I received a Ph.D. from the University of Wyoming Cooperative Research Unit in December of 1988. My doctoral dissertation topic was conservation and ecology of the black-footed ferret (*Mustela nigripes*). I began working on black-footed ferrets in 1984 when there was still a wild population (near Meeteetse, WY). I also conducted surveys for black-footed ferrets throughout the state of Wyoming for the Wyoming Game and Fish Department. From 1989 to 1991 I had a Smithsonian Post-doctoral fellowship to continue working with black-footed ferrets and prairie dogs (*Cynomys* spp.). In 1991 and 1992, I worked for the U.S. Fish and Wildlife Service National Ecology Research Center on black-footed ferret reintroduction and on mountain plover (*Charadrius montanus*) ecology. From November 1992 through January 1997, I worked for the Autonomous National University of Mexico to prepare a black-footed ferret reintroduction site on a black-tailed prairie dog (*Cynomys ludovicianus*) complex in Chihuahua and to research ecological interactions between jaguars (*Panthera onca*) and pumas (*Puma concolor*). In January 1997, I began working for the Denver Zoological Foundation. My conservation and research interests remain carnivores and prairie dogs.

3. My relevant publications include:

(1) 1987. Black-footed ferret surveys-Meeteetse, Wyoming. Morkill, A., D. Belitsky, J. Hanna, and B. Miller. Pages 47-58 In Endangered and Non-game Birds and Mammal Investigations. (Eds.) Oakleaf, B., D. Belitsky, and S. Ritter. Wyoming Game and Fish Dept., Cheyenne, Wyoming

(2) 1988. A habitat model for the black-footed ferret. Miller, B.J., G.E. Menkens, and S.H. Anderson. Pages 98-102 In Eighth Great Plains Wildlife Damage Control Workshop. U.S. Forest Service, Rapid City, South Dakota.

(3) 1988. White-tailed prairie dog ecology in Wyoming. Menkens, G.E., B.J. Miller, and S.H. Anderson. Pages 34-38 In Eighth Great Plains Wildlife Damage Control Workshop. U.S. Forest Service, Rapid City, South Dakota.

(4) 1988. Biology of the black-footed ferret (*Mustela nigripes*) the role of captive breeding in its conservation. Miller, B.J., S.H. Anderson, M.W. DonCarlos, and E.T Thorne. Canadian Journal of Zoology 66: 765-773.

(5) 1990. A proposal to conserve black footed ferrets and prairie dog ecosystem. Miller, B., C. Wemmer, D. Biggins, R. Reading. Environmental Management 14: 763-769

(6) 1992. Black-footed ferrets--rehabilitation of a species. Miller, B., D. Biggins, L. Hanebury, C. Conway, C. Wemmer. Wildlife Rehabilitation 9: 183-192.

(7) 1993. An evaluation of black-footed ferret habitat. Biggins, D.E., B.J. Miller, B. Oakleaf, A. Farmer, R. Crete and A. Dood. Pages 73-92 In Management of Prairie Dog Complexes for Black-footed Ferret Reintroduction. (Eds.) Oldemeyer, J., D. Biggins, B. Miller, and R. Crete. U.S.F.W.S. Denver, Colorado

(8) 1993. Management of black-footed ferret reintroduction sites. Miller, B.J., D.E. Biggins, and R. Crete. Pages 89-92 In Management of Prairie Dog Complexes for Black-footed Ferret Reintroduction. (Eds.) Oldemeyer, J., D. Biggins, B. Miller, and R. Crete. U.S.F.W.S. Denver Colorado.

(9) 1993. Survivability of mountain plovers on the Pawnee National Grassland in 1992. Miller, B. and F. Knopf. Journal of Field Ornithology 64: 500-506

(10) 1993. Reintroduction of the black-footed ferret. Miller, B., D. Biggins, L. Hanebury, and A. Vargas. pages 455-464 In Creative conservation: Interactive Management of Wild and Captive Animals. (Eds.) Mace, G., P. Olney, and A. Feisner, Chapmann and Hall, London.

(11) 1994. *Charadrius montanus*--grassland associate or just another bare ground plover. Knopf, F. and B. Miller. Auk 111: 504-506.

(12) 1994. Prairie Dogs, Poison, and Biotic Diversity. Miller, B., G. Ceballos, and R. Reading. Conservation Biology 8: 677-681

(13) 1994. Managing Conflict and Biodiversity in the Prairie Dog Ecosystem. Miller, B. and

G. Ceballos. Endangered Species Update 10: 1-5.

(14) 1994. The black-footed ferret recovery program. Reading, R. and B. Miller. Pages 73-100 In Endangered Species Recovery: Finding the Lessons, Improving the Process. (Eds.) Clark, T.W., A. Clarke, and R. Reading. Island Press, Covelo, California.

(15) 1997. The black-footed ferret. Biggins, D.E., B.J. Miller, T.W. Clark, and R. Reading. Conservation management case studies: The black-footed ferret. Pages 420-426 In Principles of Conservation Biology (second edition). (Eds.) Meffe, G.K. and C.R. Carroll. Sinauer Associates, Sunderland, Massechusetts.

(16) 1997. Black-footed ferret (*Mustela nigripes*): Conservation update. Reading, R.P., T.W. Clark, A. Vargas, L.R. Hanebury, B.J. Miller, D.E. Biggins, and P.E. Marinari. Small Carnivore Conservation 17: 1-6.

(17) 1999. Values and attitudes toward prairie dogs. Reading, R., B.J. Miller, S.R. Kellert. Anthrozoos 12: 43-52.

(18) 2000. The role of prairie dogs as keystone species: A response to Stapp. Miller, B., R. Reading, J. Hoogland, T. Clark, G. Ceballos, R. List, S. Forrest, L. Hanebury, P. Manzano, J. Pacheco, D. Uresk. Conservation Biology 14: 318-321.

(19) 2000. Black-footed Ferret (*Mustela nigripes*). Miller, B., R.P. Reading, and T.W. Clark. Pages 54-59 In Endangered Animals: Conflicting Issues. (Eds.) Reading, R. and B. Miller. Greenwood Press, Westport, Connecticut.

(20) 2002. The black-tailed prairie dog: Threats to survival and a plan for conservation. Miller, B. and R.P. Reading. Wild Earth 12: 44-53.

(21) 2002. Prairie dog gone: Myth, persecution, and preservation of a keystone species. McCain, L. A., R. P. Reading, and B. J. Miller. Pp. 231-236 in Welfare Ranching: The subsidized destruction of the American West (Eds.) G. Wuerthner and M. Mattson. Foundation for Deep Ecology, San Francisco, California.

(22) 2002. Black-tailed prairie dog conservation: New approach for a 21st Century challenge. Reading, R.P., T.W. Clark, L. McCain, and B.J. Miller. Pp. 162-170 in An interdisciplinary approach to endangered species recovery: Concepts, applications, cases. Special Issue, Endangered Species UPDATE 19.

(23) 1993. Descriptive ethology of the endangered black-footed ferret. Miller, B.J. and S.H. Anderson. Advances in Ethology. Paul Parey Press, Berlin. (Scientific Monograph).

(24) 1993. Management of Prairie Dog Complexes for Black-footed Ferret Reintroduction. Oldemeyer, J., D. Biggins, B. Miller, R. Crete. U.S. Fish and Wildlife Service Publications, Fort Collins, Colorado. (Edited Book.).

(25) 1996. Prairie Night: Conservation of the Black-footed Ferret. Miller, B., R. Reading, and S. Forrest. Smithsonian Institution Press, Washington D.C. (Authored Book).

5. Before European arrival, prairie dogs were one of the most numerous mammals of the prairie, occupying a shifting mosaic that covered about 20% of the western grasslands (Summers and Linder 1978). Black-footed ferrets were contiguous with prairie dog range. Today, black-tailed prairie dogs occupy around 1% of their original range (Mac et al. 1998; see also Marsh 1984), and black-footed ferrets were extirpated from the wild by early 1987 (Miller et al. 1996). Range-wide threats to prairie dogs include development (industry, commercial, and residential), conversation of native vegetative communities to croplands, disease (*Yersinia pestis*), recreational shooting, and intentional poisoning. In general, existing regulatory mechanisms, including the U.S. Bureau of Land Management's (BLM) decisions related to coal bed methane (CBM) development in the Record of Decision (ROD) to amend the Powder River and Billings Resource Management Plans, have not afforded the prairie dog with adequate protection.

6. Indeed, it is explicitly stated that there are no mitigation measures for black-tailed prairie dogs on colonies smaller than 80 acres or on colonies larger than 80 acres that have no black-footed ferrets present (4-168; 4-171; 4-174; 5-104). Because black-footed ferrets were extirpated from the wild by 1987, that idea essentially excludes prairie dogs from protection (unless the prairie dogs are located with mountain plovers between April 1 and July 31; ROD, W-6). It is also stated that "increased access provided by both CBM and user-created trails and roads over the span of all CBM phases and beyond" would increase "target shooting of animals such as prairie dogs" (4-166). Finally, Comment 157 (5-110) stated, "If prairie dogs are to be restored to